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EXAMINER	
WARD, RONALD J	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/550,955	Applicant(s) XANTHOS ET AL.
	Examiner Ronald J Ward	Art Unit 2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-140* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24, 28-41, 44-53, 55-79, 82-87, 89-96,98-125,127-140* is/are rejected.

7)☒ Claim(s) *25-27,42,43,54,80,81,88,97 and 126* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,7 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. **Claims 18-20** are objected to because of the following informalities:

In the second line of each of **claims 18-20**, it appears a word has been inadvertently omitted. The Examiner suggests inserting the word --that-- in the phrase: "...produces measurement information [that] includes...".

As to **claim 35**, in line 3, the Examiner suggests making the word "unit" plural, i.e. --units--, because the claim refers to a plurality of remote units.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. **Claims 1-2, 5-6, 9, 17-20, 28-39, 41, 44-45, 47-49, 53, 56, 61, 69-73, 76, 78, 83, 85-87, 89-90, 92, 96, 99, 104, 112-116, 118, 120, 123-125, 127-133, 135-140** are rejected under 35 U.S.C. 102(e) as being anticipated by Nilsen et al. (U.S. Patent Number 5987306).

As to **claim 1**, Nilsen discloses a method for measuring data quality of service in a traffic wireless network (see abstract) comprising the steps of:

sending command information related to data quality of service measurements (see col. 4 lines 59-63);

performing measurements to produce measurement information in relation to said command information (see col. 12 line 22 through col. 13 line 20); and

receiving response information in relation to said measurement information and said command information (see col. 5 line 36 through col. 6 line 4, especially col. 5 lines 46-48).

As to **claim 2 and 6**, Nilsen further discloses that said sending and receiving steps use a wireless link (see the two-way link labeled ARFCN in Fig. 1).

As to **claims 5 and 9**, Nilsen further discloses that said sending step uses a wired link (see col. 4 lines 59-63, see wired link between FE and FTU in Fig. 1).

As to **claims 17-20**, Nilsen further discloses that said performing step produces measurement information related to latency (see col. 12 lines 40-42), Layer 3 network information (see col. 12 lines 43-47), RF information (see col. 12 lines 30-39), and call connection information (see col. 12 lines 25-29).

As to **claim 28**, Nilsen further discloses the step of scheduling missions related to said command information (see col. 10 line 65 through col. 11 line 52).

As to **claim 29**, Nilsen further discloses the step of generating test traffic related to said message information (see col. 12 lines 43-47, wherein layer-1 and layer-3 messages constitute test traffic).

As to **claims 30-31**, Nilsen further discloses the step of storing said control information (see col. 12 lines 9-13) and said measurement information (see col. 6 lines 5-12) at a remote unit (MTU in Fig. 1).

As to **claim 32**, Nilsen further discloses the step of pre-processing said measurement information at a remote unit (MTU) (this is inherent because the MTU necessarily pre-processes the information in order to prepare it for wireless transmission).

As to **claim 33**, Nilsen further discloses the step of post-processing said measurement information at a back end processor (see col. 14 lines 8-18).

As to **claim 34**, Nilsen further discloses the step of organizing remote unit data, related to said command information at a back end processor (see col. 14 lines 20-46).

As to **claim 35**, Nilsen further discloses that the sending step includes sending said command information from a back end processor to at least one of a plurality of remote units (see col. 4 lines 59-63).

As to **claim 36**, Nilsen further discloses that said performing step includes performing said measurements using one of a plurality of remote units (MTU) (see col. 12 line 22 through col. 13 line 20).

As to **claim 37**, Nilsen further discloses that the receiving step includes receiving said response information at a back end processor (comprises FE and CeNAS in Fig. 1) from at least one of a plurality of remote units (see col. 13 lines 46-52).

As to **claim 38**, Nilsen discloses a measuring system for measuring data quality of service on at least one traffic wireless network, comprising:

a back end processor (FE, DBMS, and CeNAS in Fig. 1) for controlling the measuring system (see col. 4 lines 59-63);

a plurality of remote units (MTU in Fig. 1) in communication with said back end processor via a control link (labeled ARFCN in Fig. 1), for performing measurements on the at least one traffic wireless network (see col. 12 line 22 through col. 13 line 20).

As to **claim 39**, Nilsen further discloses that said back end processor includes a fleet management element (FE) for managing said plurality of remote units (see col. 4 lines 52-58).

As to **claim 41**, Nilsen further discloses that said back end processor includes a post processor (result collector) for post processing data collected from said plurality of remote units (see col. 14 lines 3-18).

As to **claims 44-45**, Nilsen further discloses that each of said plurality of remote units includes a control unit, which is a portable computer (micro computer) for controlling said remote unit (see col. 6 lines 5-21).

As to **claims 47-48**, Nilsen further discloses that each of said plurality of remote units includes a location unit, which is a GPS receiver, for providing position information (see col. 6 lines 13-15).

As to **claim 49**, Nilsen further discloses that each of said plurality of remote units includes a control link modem for communicating via said control link with said back end processor (see col. 8 lines 19-20).

As to **claim 53, 55, 56, 61 and 98**, Nilsen further discloses that each of said plurality of remote units includes at least one traffic modem (test mobile) for performing said measurements on a respective traffic wireless network of the at least one traffic wireless network (see col. 6 lines 13-15 and see col. 21 lines 19-30, also see col. 20 lines 5-10 wherein Nilsen discloses that said test mobile is an Orbitel 901 cellular phone commonly known to be GSM compatible).

Further as to **claims 55 and 98**, a test mobile is considered equivalent to a modem module.

As to **claims 69-73**, Nilsen further discloses that said measurements include latency (see col. 12 lines 40-42), data reliability (equivalent to bit error rate - see col. 2 lines 17-22) Layer 3 network information (see col. 12 lines 43-47), RF information (see col. 12 lines 30-39), and call connection information (see col. 12 lines 25-29).

As to **claim 76**, Nilsen further discloses that each of said plurality of remote units (MTU) includes an internal storage for storing at least one of said measurements (see col. 6 lines 5-12). Although Nilsen refers to this storage as being internal, it is considered to be external to essential components of the remote unit, and therefore the Office also considers it to be external storage.

However, Nilsen fails to explicitly recite using external storage for such purposes.

As to **claim 78**, Nilsen further discloses that each of said plurality of remote units (MTU) includes an RF scanner for measuring the at least one traffic wireless network (see col. 12 lines 30-35).

As to **claim 83**, Nilsen further discloses that at least one of said plurality of remote units is mobile (see col. 3 lines 50-53).

As to **claim 85-87**, Nilsen further discloses that said control link is wired (see col. 4 lines 59-63, see wired link between FE and FTU in Fig. 1).and wireless (see the two-way link labeled ARFCN in Fig. 1).

As to **claim 89 and 92**, Nilsen discloses a remote unit (MTU) which is one of a plurality of remote units that communicates with a back end processor (FE, DBMS, and CeNAS in Fig. 1), for measuring data quality of service on at least one traffic wireless network, comprising:

a control unit (micro computer) for controlling said remote unit;

a location unit (GPS receiver) for providing position information;

a control link modem (built in modem) for communicating via a control link with the back end processor; and

at least one traffic modem (test mobile) for performing measurements on a respective traffic wireless network of the at least one traffic wireless network (see col. 6 lines 13-15, and col. 19 line 63 through col. 20 line 15).

As to **claim 90**, Nilsen further discloses that the control unit is a portable computer (see col. 6 lines 18-21 wherein Nilsen discloses that it is designed to be transported by a vessel/vehicle).

As to **claims 96, 99 and 104**, Nilsen further discloses that each traffic modem of said at least one traffic modem performs measurements on a respective traffic wireless network of the at least one traffic wireless network (see col. 6 lines 13-15 and see col. 21 lines 19-30, also see col. 20 lines 5-10 wherein Nilsen discloses that said test mobile is an Orbitel 901 cellular phone commonly known to be GSM compatible).

As to **claims 112-116**, Nilsen further discloses that said measurements include latency measurements (see col. 12 lines 40-42), data reliability (equivalent to bit error rate - see col. 2 lines 17-22) Layer 3 network information (see col. 12 lines 43-47), RF information (see col. 12 lines 30-39), and call connection information (see col. 12 lines 25-29).

As to **claim 118**, Nilsen further discloses that the remote units (MTU) further comprise an internal storage for storing at least one of said measurements (see col. 6 lines 5-12). Although Nilsen refers to this storage as being internal, it is considered to be external to essential components of the remote unit, and therefore the Office also considers it to be external storage.

As to **claim 120**, Nilsen further discloses that the remote unit (MTU) further comprises an RF scanner for measuring the at least one traffic wireless network (see col. 12 lines 30-35).

As to **claim 123**, Nilsen further discloses that said remote unit is mobile (see col. 3 lines 50-53).

As to **claim 124-125**, Nilsen further discloses that said control link is wired (see col. 4 lines 59-63, see wired link between FE and FTU in Fig. 1).and wireless (see the two-way link labeled ARFCN in Fig. 1).

As to **claim 127**, Nilsen discloses a method for measuring data quality of service in a traffic wireless network using a back end processor (FE, DBMS, CeNAS) and plural remote units (MTU) (see abstract and Fig. 1) the method comprising:

sending command information from the back end processor to at least two of the plural remote units, the command information being related to data quality of service measurements (see col. 4 lines 59-63);

performing measurements on the traffic wireless network, using the at least two of the plural remote units, to produce measurement information in relation to said command information (see col. 12 line 22 through col. 13 line 20); and

receiving response information at the back end processor from the at least two of the plural remote units, said response information being in relation to said measurement information and said command information (see col. 5 line 36 through col. 6 line 4, especially col. 5 lines 46-48);

wherein said response information provides a measure of data quality of service in the traffic wireless network (see col. 2 lines 5-22).

As to **claim 128**, Nilsen discloses a method for measuring data quality of service in a traffic wireless network (see abstract) the method comprising:

receiving command information related to data quality of service measurements sent from a back end processor (see col. 5 lines 60-64);

performing one or more measurements of performance in the traffic wireless network to produce measurement information in relation to said command information (see col. 12 line 22 through col. 13 line 20); and

sending response information in relation to said measurement information and said command information to the back end processor (see col. 6 lines 4, see col. 13 lines 46-52).

As to **claim 129**, Nilsen discloses a method for producing a measurement result that is indicative of data quality of service in a traffic wireless network (see abstract), the method comprising:

sending command information to plural remote units, said command information being related to data quality of service measurements (see col. 4 lines 59-63);

receiving response information from the plural remote units, said response information being in relation to said command information and measurements performed on the traffic wireless network via the plural remote units (see col. 5 line 36 through col. 6 line 4);

generating a measurement result based on said response information (see col. 14 lines 19-39).

As to **claim 130**, Nilsen discloses a system for assessing data quality of service on a wireless network (see abstract), the system comprising:

means for obtaining measurements (MTU), at a statistically significant number of locations, of a performance parameter on a wireless network (see col. 3 lines 44-53); and

means for consolidating (FE, DBMS, CeNAS in Fig. 1) information indicative of the measurements obtained by the means for obtaining (see col. 3 line 66 through col. 4 line 12);

wherein the information consolidated by the means for consolidating provides an assessment of data quality of service on the wireless network (see col. 2 lines 12-26).

As to **claim 131**, Nilsen further discloses that the means for obtaining measurements comprises plural remote units (MTU in Fig. 1).

As to **claims 132-133**, Nilsen further discloses that a portion or substantially all of the plural remote units are mobile units (see col. 3 lines 50-53).

As to **claim 135**, Nilsen further discloses that the means for consolidating comprises a back end processor (CeNAS) (see col. 13 line 46 through col. 14 line 7).

As to **claim 136**, Nilsen further discloses that the means for obtaining measurements performs the function of obtaining measurements in response to command information received from the means for consolidating (see col. 4 lines 59-63 and col. 5 line 60 through col. 6 line 4).

As to **claim 137-138**, Nilsen discloses a device (MTU) for obtaining measurements indicative of data quality of service for a wireless network providing data service, the device comprising:

a control link modem (built in modem – see col. 20 line 9) providing communications with a back end processor;

a traffic modem (test mobile) providing communications via the wireless network;

a location unit providing position information (see col. 6 lines 13-15, and col. 19 line 63 through col. 20 line 15); and

a computer, the computer comprising:

a processor (see col. 20 line 6) in communication with the control link modem and the traffic modem, and being connected to the location unit; and

a memory, connected to the processor, bearing software instructions (see col. 6 lines 15-18, col. 12 lines 6-13) adapted to enable the computer to perform the steps of:

receiving command information from the back end processor (see col. 5 line 64);

receiving test traffic over the wireless network (see col. 12 lines 44-48)

sending test traffic over the wireless network based on the command information received from the back end processor (see col. 5 line 67, col. 12 lines 25-29);

receiving response traffic over the wireless network in reply to the test traffic (see col. 12 lines 44-48);

recording measurement information comprising information regarding the test traffic, the response traffic, and location information contemporaneous with the step of receiving response traffic or test traffic (see col. 12 line 58 through col. 13 line 20, col. 6 line 3);

sending the recorded measurement information to the back end processor (see col. 6 line 4).

As to **claim 139-140**, Nilsen discloses a device (MTU) for obtaining measurements indicative of data quality of service for a wireless network providing data service, the device comprising:

a modem (built in modem– see col. 20 line 9) providing communications with a back end processor and providing communications via the wireless network;

a location unit providing position information (see col. 6 lines 13-15, and col. 19 line 63 through col. 20 line 15); and

a computer, the computer comprising:

a processor (see col. 20 line 6) in communication with the control link modem and the traffic modem, and being connected to the location unit; and

a memory, connected to the processor, bearing software instructions (see col. 6 lines 15-18, col. 12 lines 6-13) adapted to enable the computer to perform the steps of:

receiving command information from the back end processor (see col. 5 line 64);

receiving test traffic over the wireless network (see col. 12 lines 44-48)

sending test traffic over the wireless network based on the command information received from the back end processor (see col. 5 line 67, col. 12 lines 25-29);

receiving response traffic over the wireless network in reply to the test traffic (see col. 12 lines 44-48);

recording measurement information comprising information regarding the test traffic, the response traffic, and location information contemporaneous with the step of receiving response traffic or test traffic (see col. 12 line 58 through col. 13 line 20, col. 6 line 3);

sending the recorded measurement information to the back end processor (see col. 6 line 4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 3, 7, 50, 93, 10, 62, 105, 12, 64, 107, 13, 65, 108, 14, 66, 109, 15, 67, 110, 16, 68, 111, 21, 58, 101, 24, 22, 59, 102, 23, 60, 103, 51, 57, 79, 94, 100, 121** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsen et al.

As to **claims 3, 7, 50, and 93**, Nilsen discloses everything as applied to claims 1, 38 and 89 above. Nilsen fails to explicitly describe using a CDPD link as part of the control link. However, the referencing of CDPD in the instant application (see page 20 lines 21-22, page 31 lines 4-5, 19-20) absent details of such or implementation of such is construed as an admission that CDPD and the use of such was well known in the art at the time the invention was made.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's control link modem to use a CDPD link for the purpose of conforming to an industry standard, thereby broadening the applicability of the device.

As to **claims 10, 62, 105, 12, 64, 107, 13, 65, 108, 14, 66, 109, 15, 67, 110, 16, 68, 111** Nilsen discloses everything as applied to claims 1, 38 and 89 above. In addition, Nilsen discloses that the measurements performed by the remote units are not limited to those explicitly listed (see col. 2 lines 17-22 and col. 12 lines 22-24 wherein Nilsen uses the word "comprise").

Moreover, the referencing of measurements related to circuit switched data, SMS messages, wireless Internet access, wireless Internet transactions, e-commerce transactions, or push data in the instant application (see page 56 lines 5-21) absent details of such or implementation of such is construed as an admission that making such measurements was well known in the art at the time the invention was made.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's system to include these types of measurements. One of ordinary skill in the art would have been motivated to make this modification because it broadens the applicability of the system to perform measurements related to commonly known messages.

As to **claims 21, 58, 101, 24, 22, 59, 102, 23, 60, 103** Nilsen discloses everything as applied to claims 1, 38 and 89 above. In addition, Nilsen discloses that the system may be used for analogous networks (see col. 18 lines 41-45). However, Nilsen fails to explicitly disclose using the system in iDEN, CDMA, TDMA, or AMPS networks.

The referencing of iDEN, CDMA, TDMA and AMPS in the instant application (see page 20 lines 21-22, page 31 lines 4-5, 19-20) absent details of such or implementation of such is construed as an admission that the use of such was well known in the art at the time the invention was made.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's system to work in these types of networks. One of ordinary skill in the art would have been motivated to make this modification because it broadens the applicability of the system for use in industry standard networks.

As to **claims 51, 57, 79, 94, 100, 121**, Nilsen discloses everything as applied to claims 1, 38 and 89 above. However, Nilsen fails to explicitly recite the use of software-defined radio in the control link modem, traffic link modem or RF scanner.

The referencing of software-defined radio in the instant application (see page 30 lines 17-21, page 35 lines 7-9) absent details of such or implementation of such is construed as an admission that the use of such was well known in the art at the time the invention was made.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's traffic modem, control link modem or RF scanner to include software-defined radio. One of ordinary skill in the art would have been motivated to make this modification because software-defined radio facilitates future modifications and enhancements.

6. **Claims 4, 8, 77, 119** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsen et al. in view of Kikinis (U.S. Patent Application Publication Number 2002/0015398).

As to **claims 4, 8, 77 and 119**, Nilsen discloses everything as applied to claims 1, 38 and 89 above. In addition, Nilsen discloses that said sending and receiving steps use a wireless link and that the back end processor is part of a LAN (see col. 8 lines 10-20). However, Nilsen fails to explicitly recite that said remote unit comprises a wireless LAN device for communicating with said back end processor.

In an analogous art, Kikinis discloses a system for measuring data quality of service (see abstract) wherein a remote unit (100-600 in Fig. 1) comprises a wireless LAN device for communicating in a network (see paragraph 77).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's remote unit to include a wireless LAN device for communicating with said back end processor. One of ordinary skill in the art would have been motivated to make this modification in order to broaden the applicability of Nilsen's system to include wireless LAN's.

7. **Claims 11, 63 and 106** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsen et al. in view of Rahman (U.S. Patent Number 6445916).

Nilsen discloses everything as applied to claims 1, 38 and 89 above. However, Nilsen fails to explicitly recite producing measurement information related to packet data.

In an analogous art, Rahman discloses a quality of service measurement system that produces measurement information related to packet data (see col. 4 lines 40-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's remote unit (MTU) to measure information related to packet data. One of ordinary skill in the art would have been motivated to make this modification because

packet data transmissions are known in the art and would further enhance the capabilities of Nilsen's data traffic network.

8. **Claims 75 and 117** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsen et al. in view of Barringer (U.S. Patent Number 5675371).

Nilsen discloses everything as applied to claims 38 and 89. However, Nilsen is silent as to what particular power supply is used in the remote units.

In an analogous art, Barringer discloses remote units having battery backup.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's remote units to include battery backup in order to extend the life of the power supply.

9. **Claims 40, 52, 95, 74, 82, 84 and 122** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsen et al. in view of Sant et al. (U.S. Patent Number 6169896).

As to **claim 40**, Nilsen discloses everything as applied to claim 38 above. However, Nilsen fails to explicitly recite that said back end processor includes a test traffic generator for generating test traffic for said plurality of remote units.

In an analogous art, Sant discloses, in Fig. 3, a similar system wherein a back end processor (30) includes a test traffic generator for generating test traffic for a remote unit (see col. 5 lines 31-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's back end processor to include a test traffic generator. One of ordinary skill in the art would have been motivated to make this modification in order to provide control over the standard for comparing various measurements.

As to **claims 52 and 95**, Nilsen discloses everything as applied to claims 49 and 89 above. In addition, Nilsen discloses that the MTU comprises means for implementing a wired modem (serial line and PCMCIA disk – see col. 20 lines 5-15).

However, Nilsen fails to explicitly recite that said control link modem is a wired modem.

In an analogous art, Sant discloses, in Figure 3, a similar system for evaluating quality of service wherein the control link modem for communicating with a back end processor (20) is a conventional wired modem (24) (see col. 4 lines 60-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's control link modem to be a wired modem, as taught by Sant. One of ordinary skill in the art would have been motivated to make this modification because wired modems can transfer large quantities of data much faster than wireless modems.

As to **claim 74**, Nilsen discloses everything as applied to claim 38 above. However, Nilsen fails to explicitly recite that each of said plurality of remote units includes a plurality of traffic modems.

In an analogous art, Sant discloses, in Figure 2, a similar system for evaluating quality of service wherein the remote unit includes a plurality of traffic modems (12a and 12) for performing measurements on at least one traffic wireless network.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's remote units to include a plurality of traffic modems, as taught by Sant. One of ordinary skill in the art would have been motivated to make this modification in order to generate a side-by-side comparison of various networks' performance (see col. 2 line 66 through col. 3 line 6 of Sant).

As to **claims 82, 84, 122 and 134**, Nilsen discloses everything as applied to claims 38 and 89 above. However, Nilsen fails to explicitly recite that at least one or substantially all of the remote units in a geographic area are stationary.

In an analogous art Sant et al. discloses a similar system for evaluating quality of service wherein the remote units are fixed or stationary (see col. 7 lines 41-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's remote units to be stationary, as taught by Sant et al. One of ordinary skill in the art would have been motivated to make this modification in order to broaden the applicability to various other wireless networks such as wireless local loop.

10. **Claims 46 and 91** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsen et al. in view of Gulledge (U.S. Patent Number 5644623).

Nilsen discloses everything as applied to claim 44 and 89 above. In addition, Nilsen discloses that said control unit is a micro computer (see col. 6 lines 13-15) and that making the remote unit suitably small is desirable (see col. 6 lines 18-21). However, Nilsen fails to explicitly recite that the control unit is a single board computer.

In an analogous art, Gulledge discloses, in Figures 1 and 2, a similar system having remote units (1 in Fig. 1) comprising control units (9 in Fig. 2) wherein, said control unit is a single board computer (see col. 5 lines 47-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nilsen's control unit to be a single board computer, as taught by Gulledge. One of ordinary skill in the art would have been motivated to make this modification in order to make the control unit smaller.

Allowable Subject Matter

11. **Claims 25, 26, 80, 81, 27, 42-43, 54, 97, 88, 126** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

As to **claims 25, 26, 80, 81**, the prior art fails to disclose or render obvious the measuring method as claimed and further comprising the step of monitoring or benchmarking a WAP gateway or WAP gateway functions.

As to **claims 27, 42-43**, the prior art fails to disclose or render obvious the measuring method as claimed and further comprising the step of accessing a portal from the Internet. Nilsen discloses that "said front end (FE) may be called up from any work station in the connected data network" (see col. 4 lines 63-65), but fails to disclose an Internet portal for providing such access.

As to **claims 54 and 97**, the prior art fails to disclose or render obvious the measuring system claimed wherein the traffic modem and the control link modem are the same modem.

As to **claims 88 and 126**, the prior art fails to disclose or render obvious the remote unit claimed wherein the remote unit's control link uses a wireless standard in relation to a geographic area of the associated remote units.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Knippelmier (U.S. Patent Number 5425076) discloses, in Figure 3, a test system for a cellular network having remote units that are both fixed (30) and mobile (36).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald J. Ward whose telephone number is (703) 305-5616. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 2600 Customer Service Office at (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

RJW
March 17, 2003

3/24/03
LESTER G. KINCAID
PRIMARY EXAMINER